

ascertain the influence of these upon the limits of vision. Thus we may use as an object a very thin glass capillary tube placed in water, and compare it with tender organic tubes and vessels, which may also be seen in water, but whose limit of visibility is of course far more circumscribed than that of absolutely opaque objects.

In fact this method admits of innumerable variations, and is consequently of most extensive application. Besides, when proper precautions are taken, it gives results perfectly sure and comparable. Especial care is, however, requisite in the mode of illumination. For it is certain, that when the field has a clear white ground, the contrast causes minute opaque bodies (*i. e.* objects which are dark by transmitted light) to continue visible, which against a grayish or light-blue back-ground could not be seen. Hence it is by no means indifferent to receive on the mirror light from a white cloud, from a dull overcast, or clear blue sky. Artificial light cannot be used in these experiments, for the image of the flame becomes diminished like the object, and hence a clear field of view is not to be obtained. The observations must consequently be made by daylight; and whenever comparable results are sought for, the mirror should always be directed to the clear, blue, cloudless sky—this being a distinct atmospheric condition to which others in similar circumstances may refer in conducting the same experiment. The mode of ascertaining the limit of vision, with a given amount of illumination, may be gathered from different examples in the body of this work\*. It will likewise be found that for all such observations, even when the highest magnifying powers are employed, the *flat* mirror is perfectly sufficient, since in the image in the field of view formed by the air-bell, all the rays proceeding from the mirror are united and constitute an object of considerable luminous intensity.—*Monthly Journal of Medical Science*, April 1853.

## MARINE VIVARIA.

*To the Editors of the Annals of Natural History.*

Weymouth, May 24, 1853.

GENTLEMEN,—With reference to plants for Marine Vivaria I have to state, that some species, if not all, do equally well without their roots being attached. On the 4th of May I placed a few mollusks in a glass 8 inches in height and 4 across; I also placed in it a plant of *Rhodymenia palmata*, but which had no root attached; I therefore attached it by means of a thread to a small piece of stone in order to keep the plant erect. This plant alone has supplied the water with oxygen to this day, and appears as healthy as the day it was put in, now three weeks since. The animals are alive and the water has not been changed.

I am, Gentlemen, yours obediently,  
WILLIAM THOMPSON.

\* It is unnecessary to introduce any examples here, the author's description of his method being both full and suggestive.—EDITOR.